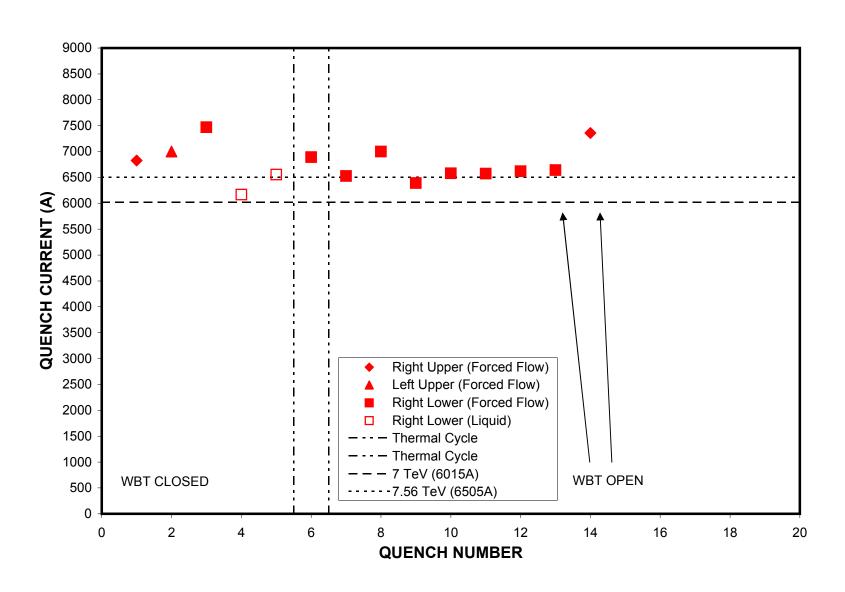
D2L104 QUENCH TESTS



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D2L104 QUENCH SUMMARY

UENCH		CURRENT	Т1	Т3	START	MIITS	COIL		COMMENTS
#	#	(A)	(K)	(K)	(ms)				
	re tul	m) oes install cooling @ 1		d, and ur	nder vac	uum			
1	26	6827	4.822	5.226	-29	9.5	upper	right	
2	27	7001	4.839	5.267	-20	9.3	upper	left	h
3	28	7469	4.847	5.231	-18	12.1(i)	lower	right	
iquid	heliur	m bath cool	ing @ 1.4a	atm					
4	29	6169	4.681	4.665	-28	8.9	lower	right	j
5	30	6553	4.710	4.696	-30	8.6	lower	right	k
3 = 4.5	K (nor ore tul	oes install cooling @ 1	ed, sealed	d, and ur	nder vac	uum	lower	right	
3 = 4.5	K (nor ore tul	m) oes install	ed, sealed						
y = 4.5 Jarm bo Yorced	K (nor ore tul flow o	m) oes install cooling @ 1 6890	ed, sealed 2atm 4.753	d, and ur 5.220	nder vac -25	uum	lower	right	
T = 4.5 Jarm bo Torced 6 Chermal T = 4.5 Jarm bo	ore tuber of the state of the s	m) oes install cooling @ 1 6890 e (cryo shu	ed, sealed 2atm 4.753 tdown for	d, and ur 5.220 maintena	-25	uum 9.7	lower	right	
T = 4.5 Jarm bo Torced 6 Chermal T = 4.5 Jarm bo	ore tuber of the state of the s	m) Des install Cooling @ 1 6890 De (cryo shu m) Des install	ed, sealed 2atm 4.753 tdown for	5.220 maintena	-25 nnce)	uum 9.7 uum			
Thermal Torced Thermal Thermal Thermal Thermal Thermal Thermal	SK (nor pre tul flow of 32 SK (nor pre tul flow of flow of flow of the flow of	m) pes install cooling @ 1 6890 e (cryo shu m) pes install cooling @ 1	ed, sealed 2atm 4.753 tdown for ed, sealed 2atm 4.732	5.220 maintena	-25 Ince) Ider vac	uum 9.7 uum 9.7		right	
Thermal Tarm book Thermal Thermal Thermal Thermal Thermal	SK (nor tuke flow of 32 SK (nor ore tuke flow of 39	m) pes install cooling @ 1 6890 e (cryo shu m) pes install cooling @ 1 6528 6999	ed, sealed 2atm 4.753 tdown for ed, sealed 2atm 4.732	5.220 maintenad, and ur 5.191 5.144	-25 Ince) ader vac	9.7 uum 9.7 10.0	lower	right	
Thermal Torced Thermal	SK (nor pre tuke flow of 32 Cycle SK (nor pre tuke flow of 39 40	m) pes install cooling @ 1 6890 e (cryo shu m) pes install cooling @ 1 6528 6999	ed, sealed 2atm 4.753 tdown for ed, sealed 2atm 4.732 4.713	5.220 maintenad, and ur 5.191 5.144	-25 nnce) ader vac -34 -30 -38	9.7 uum 9.7 10.0	lower	right right right	
Thermal Thermal Torced Thermal Torced Torced Torced Torced Torced Torced Torced	The second secon	m) pes install cooling @ 1 6890 e (cryo shu m) pes install cooling @ 1 6528 6999 6391	ed, sealed 2atm 4.753 tdown for ed, sealed 2atm 4.732 4.713 4.709	maintena d, and ur 5.191 5.144 5.145	-25 -34 -30 -38 -34	uum 9.7 10.0 9.7 9.8	lower lower lower	right right right right	
Thermal Therma	Cycle K (nor 32 Cycle K (nor re tul flow (39 40 41 42	m) pes install cooling @ 1 6890 e (cryo shu m) pes install cooling @ 1 6528 6999 6391 6579	ed, sealed 2atm 4.753 tdown for ed, sealed 2atm 4.732 4.713 4.709 4.714	maintenad, and ur 5.220 maintenad, and ur 5.191 5.144 5.145 5.166	-25 Ince) ader vac -34 -30 -38 -34 -32	uum 9.7 10.0 9.7 9.8	lower lower lower	right right right right right	
Thermal Therma	SK (nor tuke flow of 32 SK (nor tuke flow of 39 40 41 42 43 44	m) pes install cooling @ 1 6890 e (cryo shu m) pes install cooling @ 1 6528 6999 6391 6579 6573	ed, sealed 2atm 4.753 tdown for ed, sealed 2atm 4.732 4.713 4.709 4.714 4.689	maintenad, and ur 5.220 maintenad, and ur 5.191 5.144 5.145 5.166 5.139	-25 Ince) Ider vac -34 -30 -38 -34 -32	uum 9.7 10.0 9.7 9.8 9.7	lower lower lower lower	right right right right right	

Notes:

- a) Ramp rate for quenches was 20A/s.
- b) Energy extraction used: 35mohms for all quenches.
- c) The temperature T1 is a diode sensor located in the helium return line tube which contains the superconducting bus; T3 is in the lower lead interconnect pot. Both have associated redundant sensors.
- d) There were no auxiliary voltage taps in the magnet coils.
- e) Data acquisition sampling rate was 1kHz for all quenches.
- f) Strip heaters were fired at 475V (nom) and 96A (nom), with 1ms delay.
- g) Voltage spikes were seen on the voltage difference signals for all quenches. For quenches #2 and #11, a spike occurred right before the quench start.
- h) For Quench #2, the lower left coil also quenched, at -19ms.
- i) For Quench #3, the strip heaters did not fire, resulting in higher miits generated.
- j) For Quench #4, the upper left coil also quenched, at +58ms (approx).
- k) For Quench #5, the upper left coil also quenched, at +53ms (approx), and the upper right at +56ms (approx).
- 1) Starting with Quench #14 (Run #46), the voltage difference quench detector threshold voltage was decreased from 1.6V to 0.6V to lower miits generation.